

RAW SEQUENCE LISTING

DATE: 04/15/2003

PATENT APPLICATION: US/09/887,669

TIME: 13:17:22

Input Set : A:\38621246.app

Output Set: N:\CRF4\04152003\I887669.raw

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3 <110> APPLICANT: SCHLESSINGER, JOSEPH
             SAP, JAN M.
     5
             ULLRICH, AXEL
            VOGEL, WOLFGANG
     7
            FUCHS, MIRIAM
     9 <120> TITLE OF INVENTION: NOVEL RECEPTOR-TYPE PHOSPHOTYROSINE PHOSPHATASE-KAPPA
    11 <130> FILE REFERENCE: 038602/1246
    13 <140> CURRENT APPLICATION NUMBER: 09/887,669
C--> 14 <141> CURRENT FILING DATE: 2001-10-10
    16 <150> PRIOR APPLICATION NUMBER: 09/234,883
    17 <151> PRIOR FILING DATE: 1999-01-21
    19 <150> PRIOR APPLICATION NUMBER: 08/087,244
    20 <151> PRIOR FILING DATE: 1993-07-01
    22 <150> PRIOR APPLICATION NUMBER: 08/049,384
                                                             ENTERED
    23 <151> PRIOR FILING DATE: 1993-04-21
    25 <160> NUMBER OF SEQ ID NOS: 13
    27 <170> SOFTWARE: PatentIn Ver. 2.1
    29 <210> SEQ ID NO: 1
    30 <211> LENGTH: 1457
    31 <212> TYPE: PRT
     32 <213> ORGANISM: Mus musculus
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     44 Asp Leu Tyr Asp Asp Phe Glu Trp Val His Val Ser Ala Gln Glu Pro
                               55
     47 His Tyr Leu Pro Pro Glu Met Pro Gln Gly Ser Tyr Met Val Val Asp
    50 Ser Ser Asn His Asp Pro Gly Glu Lys Ala Arg Leu Gln Leu Pro Thr
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                       85
     53 Met Lys Glu Asn Asp Thr His Cys Ile Asp Phe Ser Tyr Leu Leu Tyr
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                  100
    56 Ser Gln Lys Gly Leu Asn Pro Gly Thr Leu Asn Ile Leu Val Arg Val
    57 115
                                  120
                                                       125
     59 Asn Lys Gly Pro Leu Ala Asn Pro Ile Trp Asn Val Thr Gly Phe Thr
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                                                  140
     62 Gly Arg Asp Trp Leu Arg Ala Glu Leu Ala Val Ser Thr Phe Trp Pro
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     65 Asn Glu Tyr Gln Val Ile Phe Glu Ala Glu Val Ser Gly Gly Arg Ser
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68 Gly	Tvr	Ile	Ala		asA	Asp	Ile	Gln		Leu	Ser	Tyr	Pro		Asp
69	- 1 -		180		- 1	•		185					190	-	_
71 Lys	Ser	Pro	His	Phe	Leu	Arg	Leu	Gly	Asp	Val	Glu	Val	Asn	Ala	Gly
72		195					200					205			
74 Gln	Asn	Ala	Thr	Phe	Gln	Cys	Ile	Ala	Thr	Gly	Arg	Asp	Ala	Val	His
75 ·	210					215					220				
77 Asn	Lys	Leu	Trp	Leu		Arg	Arg	Asn			Asp	Ile	Pro	Val	
78 225					230		_	_		235		_		_	240
80 Gln	Thr	Lys	Asn		Asn	His	Arg	Arg		Ата	Ата	Ser	Pne		Leu
81	01	*7 - 7	m\	245	mb	7. ~~	C1 ~	7 00	250	Ф~	7\~~	Cvc	Val	255	Gln
83 Gln	GIU	vaı	260	ràs	Thr	Asp	GTII	265	ьеи	ıyı	Arg	Cys	270	1111	GIII
84 86 Ser	Clu	7~~		Sar	G1 v	U = 1	Sar		Phe	Δla	Gln	T.e.11		Val	Ara
87	GIU	275	GTÀ	Der	Gry	vaı	280	ASII	TIIC	7114	0111	285	110		9
89 Glu	Pro		Ara	Pro	Tle	Ala		Pro	Gln	Leu	Leu		Val	Glv	Pro
90	290		9			295					300	_		_	
92 Thr		Leu	Leu	Ile	Gln	Leu	Asn	Ala	Asn	Ser	Ile	Ile	Gly	Asp	Gly
93 305	2				310					315					320
95 Pro	Ile	Ile	Leu	Lys	Glu	Val	${\tt Glu}$	Tyr	Arg	Met	Thr	Ser	Gly	Ser	Trp
96				325					330					335	
98 Thr	Glu	Thr	His	Ala	Val	Asn	Ala	Pro	Thr	Tyr	Lys	Leu	Trp	His	Leu
99			340					345					350		
101 Ası	o Pro	Asp	Thr	Glu	ı Tyr	: Glı	ı Ile	e Arq	g Val	. Let	ı Leı	ı Thr	r Ar	g Pro	Gly
102		355					360					365			
104 Gl			/ Thr	Gly	Let			y Pro	o Pro	Let			Arq	g Thi	Lys
105	370		_		_	375		-	m.	-	380		70.7		
107 Cys		a Glu	ı Pro) Met			r Pro	o Lys	s Thr			3 116	e Ala	a GII	400
108 385		. 7	. 7	. т1.	390		1 70	о П.v.	- C1v	395		. 61.	, Ti	- 7\cr	-
110 Gl	n Ala	a Arc	JAro	405		ı val	L AS	o it	410		. ner	1 91)	, 171	41!	
111 113 Th:	r 71 rc	· Cv	. Hic			Δer	. Va	l Thi			: Тул	· His	s Tvi		-
113 111.	r wr	у Суз	420			, 1131	ı va.	425			, - , -		430		
116 Gl	v His	s Asr			Arc	ı Ala	a Ası		_	ı Asr	Met	Asr	Pro	Ly:	s Ala
117	7	435			-	,	440			-		445		_	
119 Pr	o Glr	n His	s Val	. Val	Asr	n His	s Le	ı Pro	o Pro	туг	Thi	: Asr	n Vai	l Se	r Leu
120	450					455					460				
122 Ly:	s Met	: Ile	e Leu	ı Thi	Asr	n Pro	o Gli	ı Gl	y Arc	J Lys	s Glu	ı Sei	c Gl	ı Glı	ı Thr
										475					480
123 46	5				470)				4/1	,				
123 46 125 Ile		e Glr	n Thr	: Asp			o Vai	l Pro	o Gly			L Pro	o Vai	L Ly:	s Ser
125 Ile 126	e Ile			485	Glu S	ı Asp			490	y Pro	Va.			49	5
125 Il	e Ile			485	Glu S	ı Asp		n Lys	490 s Ile	y Pro	Va.			49	5
125 Ile 126 128 Les 129	e Ile u Glr	n Gly	y Thr 500	485 Sei	Glu F Phe	ı Asp	ı Ası	n Lys 505	490 s Ile 5	y Pro) e Phe	Val	ı Asr	n Trj 510	499 Dy:	5 s Glu
125 Ile 126 128 Le 129 131 Pre	e Ile u Glr	n Gly u Glu	y Thr 500 ı Pro	485 Sei	Glu F Phe	ı Asp	ı Ası	n Lys 505 e The	490 s Ile 5	y Pro) e Phe	Val	ı Asr ı Val	n Trp 510 L Se:	499 Dy:	5 s Glu
125 Ile 126 128 Le 129 131 Pro	e Ile u Glr o Lei	n Gly u Gly 515	y Thr 500 ı Pro	485 Sei) Asi	Glu G Phe n Gly	ı Asp e Glu / Ile	a Ası e Ile 520	n Lys 50! e Thi	490 s Ile 5 r Glr	y Pro) e Phe n Ty:	Value Leu	ı Asr Val 525	Trp 510 L Se:	499 D Lys C Ty:	S Glu r Ser
125 Ile 126 128 Le 129 131 Pro 132 134 Se	e Ile u Glr o Leu r Ile	Gly Gly 515 Arc	y Thr 500 ı Pro	485 Sei) Asi	Glu G Phe n Gly	Asp Glu Ile Pro	Ası E Ile 520 D Ala	n Lys 50! e Thi	490 s Ile 5 r Glr	y Pro) e Phe n Ty:	Value Leu Glu	ı Asr ı Val 525 a Gly	Trp 510 L Se:	499 D Lys C Ty:	S Glu r Ser
125 Ile 126 128 Le 129 131 Pre 132 134 Se: 135	e Ile u Glr o Leu r Ile 530	Gly Gly 515 Arc	y Thr 500 1 Pro 5 3 Ser	485 Sei Sei Asi	o Glu o Phe n Gly	Asp Glu Glu Glu Fro 53!	ASI E Ile 520 D Ala	n Lys 505 e Thi O a Val	490 s Ile 5 r Glr l Pro	y Pro) e Phe n Tyr val	Value Let Glue Ala 540	ı Asr ı Val 525 a Gly	n Tri 510 L Se: 5	499 D Lys Tys	s Glu r Ser
125 Ile 126 128 Le 129 131 Pro 132 134 Se	e Ile u Glr o Leu r Ile 530 r Val	Gly Gly 515 Arc	y Thr 500 1 Pro 5 3 Ser	485 Sei Sei Asi	o Glu o Phe n Gly	Asp E Glu V Ile Pro 539 Asp	ASI E Ile 520 Ale	n Lys 505 e Thi O a Val	490 s Ile 5 r Glr l Pro	y Pro) e Phe n Tyr val	Value Let Glue Ala 540	ı Asr ı Val 525 a Gly	n Tri 510 L Se: 5	499 D Lys Tys	s Glu r Ser

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140 141	His	Pro	Gly	Thr	Thr 565	Tyr	Gln	Phe	Phe	Ile 570	Arg	Ala	Ser	Thr	Val 575	Lys
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	Pro	Ser	Leu 595		Asp	Tyr	Glu	Gly 600		Asp	Ala	Ser	Leu 605		Glu	Thr
	Ala	Thr 610		Ile	Thr	Val	Leu 615		Arg	Pro	Ala	Gln 620		Lys	Gly	Ala
152	Pro 625		Ser	Ala	Tyr	Gln 630		Val	Val	Glu	Gln 635		His	Pro	His	Arg 640
		Lys	Arg	Glu	Ala 645		Ala	Met	Glu	Cys 650	Tyr	Gln	Val	Pro	Val 655	
	Tyr	Gln	Asn	Ala 660		Ser	Gly	Gly	Ala 665		Tyr	Tyr	Phe	Ala 670		Glu
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	Asn	Arg 690		Tyr	Lys	Gly	Phe 695		Asn	Pro	Pro	Leu 700		Pro	Arg	Lys
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170		Thr	Gln	Cys	Val 725		Ile	Ala	Thr	Lys 730	Ala	Ala	Ala	Thr	Glu 735	
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174 176 177	Ile	Ala	Gly 755		Ser	Ala	Gly	Ile 760		Val	Phe	Ile	Leu 765	-	Leu	Leu
	Val	Val 770		Val	Ile	Val	Lys 775		Ser	Lys	Leu	Ala 780		Lys	Arg	Lys
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215 Trp Leu Tyr Arg Asp Gly Tyr Gln Arg Pro Ser His Ty	r Ile Ala Thr
216 965 970	975
218 Gln Gly Pro Val His Glu Thr Val Tyr Asp Phe Trp Arc	g Met Val Trp
219 980 985	990
221 Gln Glu Gln Ser Ala Cys Ile Val Met Val Thr Asn Let	ı Val Glu Val
222 995 1000 1009	
224 Gly Arg Val Lys Cys Tyr Lys Tyr Trp Pro Asp Asp Th	
225 1010 1015 1020	. Old val 1 jl
227 Gly Asp Phe Lys Val Thr Cys Val Glu Met Glu Pro Let	ı Ala Clu Tur
228 1025 1030 1035	1040
230 Val Val Arg Thr Phe Thr Leu Glu Arg Arg Gly Tyr Asi	_
231 1045 1050	1055
233 Glu Val Lys Gln Phe His Phe Thr Gly Trp Pro Asp His	
234 1060 1065	1070
236 Tyr His Ala Thr Gly Leu Leu Ser Phe Ile Arg Arg Va	
237 1075 1080 1089	
239 Asn Pro Pro Ser Ala Gly Pro Ile Val Val His Cys Ser	r Ala Gly Ala
240 1090 1095 1100	
242 Gly Arg Thr Gly Cys Tyr Ile Val Ile Asp Ile Met Leu	ı Asp Met Ala
243 1105 1110 1115	1120
245 Glu Arg Glu Gly Val Val Asp Ile Tyr Asn Cys Val Lys	s Ala Leu Arg
246 1125 1130	1135
248 Ser Arg Arg Ile Asn Met Val Gln Thr Glu Glu Gln Ty	r Ile Phe Ile
249 1140 1145	1150
251 His Asp Ala Ile Leu Glu Ala Cys Leu Cys Gly Glu Th	
252 1155 1160 1165	
254 Val Cys Glu Phe Lys Ala Ala Tyr Phe Asp Met Ile Arg	
255 1170 1175 1180	g IIC ASP SCI
257 Gln Thr Asn Ser Ser His Leu Lys Asp Glu Phe Gln Th	r Iou Acn Cor
	1200
250 1105	
260 Val Thr Pro Arg Leu Gln Ala Glu Asp Cys Ser Ile Ala	
261 1205 1210	1215
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261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser	1215 o Pro Asp Arg 1230 r Asn Tyr Ile
261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225	1215 o Pro Asp Arg 1230 r Asn Tyr Ile
261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser	1215 Pro Asp Arg 1230 Asn Tyr Ile
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261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser 267 1235 1240 1249 269 Asn Ala Ala Leu Met Asp Ser Tyr Arg Gln Pro Ala Ala 270 1250 1255 1260 272 Thr Gln Tyr Pro Leu Pro Asn Thr Val Lys Asp Phe Try	1215 D Pro Asp Arg 1230 T Asn Tyr Ile D Phe Ile Val
261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser 267 1235 1240 1245 269 Asn Ala Ala Leu Met Asp Ser Tyr Arg Gln Pro Ala Ala 270 1250 1255 1260 272 Thr Gln Tyr Pro Leu Pro Asn Thr Val Lys Asp Phe Try 273 1265 1270 1275	1215 D Pro Asp Arg 1230 r Asn Tyr Ile D Arg Leu Val 1280
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261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser 267 1235 1240 1245 269 Asn Ala Ala Leu Met Asp Ser Tyr Arg Gln Pro Ala Ala 270 1250 1255 1260 272 Thr Gln Tyr Pro Leu Pro Asn Thr Val Lys Asp Phe Try 273 1265 1270 1275 275 Tyr Asp Tyr Gly Cys Thr Ser Ile Val Met Leu Asn Glu 276 1285 1290	1215 D Pro Asp Arg 1230 T Asn Tyr Ile D Arg Leu Val 1280 D Val Asp Leu 1295
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261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser 267 1235 1240 1249 269 Asn Ala Ala Leu Met Asp Ser Tyr Arg Gln Pro Ala Ala 270 1250 1255 1260 272 Thr Gln Tyr Pro Leu Pro Asn Thr Val Lys Asp Phe Trg 273 1265 1270 1275 275 Tyr Asp Tyr Gly Cys Thr Ser Ile Val Met Leu Asn Gly 276 1285 1290 278 Ser Gln Gly Cys Pro Gln Tyr Trp Pro Glu Glu Gly Met 279 1300 1305 281 Gly Pro Ile Gln Val Glu Cys Met Ser Cys Ser Met Asp	1215 D Pro Asp Arg 1230 T Asn Tyr Ile D Arg Leu Val 1280 D Val Asp Leu 1295 Leu Arg Tyr 1310 D Cys Asp Val
261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser 267 1235 1240 1249 269 Asn Ala Ala Leu Met Asp Ser Tyr Arg Gln Pro Ala Ala 270 1250 1255 1260 272 Thr Gln Tyr Pro Leu Pro Asn Thr Val Lys Asp Phe Trg 273 1265 1270 1275 275 Tyr Asp Tyr Gly Cys Thr Ser Ile Val Met Leu Asn Glu 276 1285 1290 278 Ser Gln Gly Cys Pro Gln Tyr Trp Pro Glu Glu Gly Met 279 1300 1305 281 Gly Pro Ile Gln Val Glu Cys Met Ser Cys Ser Met Asg 282 1315 1320 1328	1215 D Pro Asp Arg 1230 r Asn Tyr Ile D Arg Leu Val 1280 1 Val Asp Leu 1295 t Leu Arg Tyr 1310 D Cys Asp Val
261 1205 1210 263 Arg Asn His Asp Lys Asn Arg Phe Met Asp Met Leu Pro 264 1220 1225 266 Cys Leu Pro Phe Leu Ile Thr Ile Asp Gly Glu Ser Ser 267 1235 1240 1249 269 Asn Ala Ala Leu Met Asp Ser Tyr Arg Gln Pro Ala Ala 270 1250 1255 1260 272 Thr Gln Tyr Pro Leu Pro Asn Thr Val Lys Asp Phe Trg 273 1265 1270 1275 275 Tyr Asp Tyr Gly Cys Thr Ser Ile Val Met Leu Asn Gly 276 1285 1290 278 Ser Gln Gly Cys Pro Gln Tyr Trp Pro Glu Glu Gly Met 279 1300 1305 281 Gly Pro Ile Gln Val Glu Cys Met Ser Cys Ser Met Asp	1215 D Pro Asp Arg 1230 r Asn Tyr Ile D Arg Leu Val 1280 1 Val Asp Leu 1295 t Leu Arg Tyr 1310 D Cys Asp Val

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287 Tyr Leu Met Val Gln Gln Phe Gln Tyr Leu Gly Trp Ala Ser His Arg 1350 288 1345 1355 290 Glu Val Pro Gly Ser Lys Arg Ser Phe Leu Lys Leu Ile Leu Glm Val 1370 1365 293 Glu Lys Trp Gln Glu Glu Cys Glu Glu Gly Glu Gly Arg Thr Ile Ile 294 1380 1385 296 His Cys Leu Asn Gly Gly Gly Arg Ser Gly Met Phe Cys Ala Ile Gly 297 1395 1400 1405 299 Ile Val Val Glu Met Val Lys Arg Gln Asn Val Val Asp Val Phe His 1415 302 Ala Val Lys Thr Leu Arg Asn Ser Lys Pro Asn Met Val Glu Ala Pro 1435 1430 305 Glu Gln Tyr Arg Phe Cys Tyr Asp Val Ala Leu Glu Tyr Leu Glu Ser 306 1445 1450 308 Ser 311 <210> SEQ ID NO: 2 312 <211> LENGTH: 1439 313 <212> TYPE: PRT 314 <213> ORGANISM: Homo sapiens 316 <400> SEQUENCE: 2 317 Met Asp Thr Thr Ala Ala Ala Leu Pro Ala Phe Val Ala Leu Leu 5 10 320 Leu Leu Ser Pro Trp Pro Leu Leu Gly Ser Ala Gln Gly Gln Phe Ser 25 323 Ala Gly Gly Cys Thr Phe Asp Asp Gly Pro Gly Ala Cys Asp Tyr His 35 40 326 Gln Asp Leu Tyr Asp Asp Phe Glu Trp Val His Val Ser Ala Gln Glu 55 329 Pro His Tyr Leu Pro Pro Glu Met Pro Gln Gly Ser Tyr Met Ile Val 70 75 332 Asp Ser Ser Asp His Asp Pro Gly Glu Lys Ala Arg Leu Gln Leu Pro 335 Thr Met Lys Glu Asn Asp Thr His Cys Ile Asp Phe Ser Tyr Leu Leu 100 105 338 Tyr Ser Gln Lys Gly Leu Asn Pro Gly Thr Leu Asn Ile Leu Val Arg 115 120 341 Val Asn Lys Gly Pro Leu Ala Asn Pro Ile Trp Asn Val Thr Gly Phe 130 135 344 Thr Gly Arg Asp Trp Leu Arg Ala Glu Leu Ala Val Ser Thr Phe Trp 155 347 Pro Asn Glu Tyr Gln Val Ile Phe Glu Ala Glu Val Ser Gly Gly Arg 170 175 165 350 Ser Gly Tyr Ile Ala Ile Asp Asp Ile Gln Val Leu Ser Tyr Pro Cys 180 185 . 190 353 Asp Lys Ser Pro His Phe Leu Arg Leu Gly Asp Val Glu Val Asn Ala 200 356 Gly Gln Asn Ala Thr Phe Gln Cys Ile Ala Thr Gly Arg Asp Ala Val 357 210 215 359 His Asn Lys Leu Trp Leu Gln Arg Arg Asn Gly Glu Asp Ile Pro Val VERIFICATION SUMMARY

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date